TOANSMIT	TAL FORM	Application No.	10/691,852	
		Filing Date	October 22, 2003	
(to be used for all corres	pondence after initial fil	First Named Inventor	Tae Woong Kang	
		Art Unit		
		Examiner Name		
Total Number of Pages in	This Submission 9	Attorney Docket Number	5882P061	
	ENCLOSURES	(check all that apply)		
Fee Transmittal Form	☐ Draw	ring(s)	After Allowance Communicate to Group	
Fee Attached	Licer	sing-related Papers	Appeal Communication to Bo of Appeals and Interferences	
Amendment / Response	Petitio	on	Appeal Communication to Gro (Appeal Notice, Brief, Reply Brief)	
After Final Affidavits/declarate	ion(s)	on to Convert a sional Application	Proprietary Information	
Extension of Time Reque	Powe Char	er of Attorney, Revocation ge of Correspondence Address	Status Letter	
Express Abandonment R		inal Disclaimer	Other Enclosure(s) (please identify below):	
Information Disclosure S	tatement Requ	est for Refund	Korean Office Action; Pricart Reference (1); return	
PTO/SB/08  Certified Copy of Priority Document(s)	PTO/SB/08 CD, Certified Copy of Priority		postcard	
Response to Missing Pa Incomplete Application  Basic Filing F	Remarks			
Declaration/F	OA			
Response to Miss Parts under 37 Cf 1.52 or 1.53	ing FR		_	
	SIGNATURE OF APPL	LICANT, ATTORNEY, OR A	GENT	
or	S. Hyman, Reg. No	•	MANII D	
Signature  BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP				
Date 6/doy				
	CERTIFICATE OF	MAILING/TRANSMISSION	<del>- 7</del>	
	ondence is being deposited	with the United States Postal Ser	vice on the date shown below with suffice 1450, Alexandria, VA 22313-1450.	



# FEETRANSMITTAL for FY 2004

Effective 01/01/2004. Patent fees are subject to annual revision.

Based on PTO/SB/17 (10-03) as modified by Blakely, Solokoff, Taylor & Zafman (wlr) 02/07/2004. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT

(\$)

	Complete if Known					
Application Number	10/691,852					
Filing Date	October 22, 2003					
First Named Inventor	Tae Woong Kang					
Examiner Name						
Art Unit						
Attorney Docket No.	5882P061					

METHOD OF PAYMENT (check all that apply)				FE	E CALCULATION (continue	ed)
☐ Check ☐ Credit card ☐ Money ☐ Other ☐ None		DDITIO	NAL	FEES		
Deposit Account	Large	e Entity	Sma	II Entity		
l <sup>—</sup>	Fee Code	Fee (\$)	Fee Code	Fee (\$)	Enc December	Con Drid
Account Number 02-2666	i				Fee Description	FeePaid
	1051 1052	130 50	2051 2052	65 25	Surcharge - late filing fee or oath Surcharge - late provisional filing fee or	
Deposit Account Name Blakely, Sokoloff, Taylor & Zafman LLP					cover sheet.	
	2053 1812	130 2,520	2053 1812	130 2,520	Non-English specification  For filing a request for ex parte reexamina	ation
The Commissioner is authorized to: ( check all that apply)  Charge fee(s) indicated below  Credit any overpayments	1804	920 *	1804	920	Requesting publication of SIR prior to	
Channel and additional fac(s) as undersourced of face on required under 27 CER					Examiner action	
§§ 1.16, 1.17, 1.18 and 1.20.	1805	1,840 *	1805	1,840	Requesting publication of SIR after Examiner action	
Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account	1251	110	2251	56	Extension for reply within first month	
FEE CALCULATION	1252	420	2252	210	Extension for reply within second month	
1. BASIC FILING FEE	1253	950	2253	475	Extension for reply within third month	
Large Entity Small Entity	1254	1,480	2254	740	Extension for reply within fourth month	
Fee Fee Fee Fee Fee Description Fee Fee Paid  Code (\$)	1255	2,010	2255	1,005	Extension for reply within fifth month	
1001 770 2001 385 Utility filing fee	1404	330	2401	165	Notice of Appeal	
1002 340 2002 170 Design filing fee	1402	330 290	2402	165 145	Filing a brief in support of an appeal  Request for oral hearing	
1003 530 2003 265 Plant filing fee	1403 1451	1,510	2403	1,510	Petition to institute a public use proceeding	na
1004 770 2004 385 Reissue filing fee	1452	110	2452	55	Petition to revive - unavoidable	·•
	1453	1,330	2453	665	Petition to revive - unintentional	<del></del>
SUBTOTAL (1) (\$)	1501	1,330	2501	665	Utility issue fee (or reissue)	
2. EXTRA CLAIM FEES Extra Fee from	1502	480	2502	240	Design issue fee	
Claims below FeePaid Total Claims =	1503	640	2503	320	Plant issue fee	
Independent - 20 = X	1460	130	2460	130	Petitions to the Commissioner	
Clairins X = = Multiple Dependent = = = = = = = = = = = = = = = = = = =	1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
Large Entity   Small Entity	1806 8021	180 40	1806 8021	180 40	Submission of Information Disclosure Str Recording each patent assignment per	
Fee Fee Fee Fee Description		~	- COLE 1	~	property (times number of properties)	
Code (\$) Code (\$)	1809	770	1809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1202 18 2202 9 Claims in excess of 20	1810	770	2810	385	For each additional invention to be	
1201         86         2201         43         Independent claims in excess of 3           1203         290         2203         145         Multiple Dependent claim, if not paid	10.10	,,,	20.0	•	examined (37 CFR § 1.129(b))	
1204 86 2204 43 **Reissue independent claims over original	1801	770	2801	385	Request for Continued Examination (RCE	) .
patent	1802	900	1802	900	Request for expedited examination of a design application	
1205 18 2205 9 **Reissue claims in excess of 20 and over original patent	Other fe	ee (specify)				
SUBTOTAL (2) (\$)						
**or number previously paid, if greater, For Reissues, see below	* Reduced by Basic Filing Fee Pai		Paid	SUBTOTAL (3)	(\$)	
SUBMITTED BY		<del></del>			Comp	lete (if applicable)
Name (Print/Type) Eric S. Hyman		egistratio		3	70,139 Telephone	(310) 207-3800
Signature					Date	8/10/09



Docket No.: 5882P061

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

in Re the Application of:

TAE WOONG KANG, ET AL.

Application No.: 10/691,852

Filed: October 22, 2003

For:

single electron device, method of manufacturing the same, and method of simultaneously manufacturing

single electron device and mos transistor

Art Group:

Examiner:

## INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

In accordance with the duty of disclosure, enclosed is a copy of IDS Citation Form PTO/SB/08 or PTO-1449, together with copies of the documents cited on that form, except for copies not required to be submitted (e.g., copies of U.S. patents and U.S. published patent applications need not be enclosed for applications filed after June 30, 2003). This IDS and IDS Citation Form are being submitted before the mailing of a first Office Action. It is respectfully requested that the cited references be considered and that the enclosed copy of PTO/SB/08 be initialed by the Examiner to indicate such consideration and a copy thereof returned to applicant(s).

The references were cited in a Search Report dated June 29, 2004 (copy enclosed herewith) in a counterpart Korean application, which was forwarded to Applicant's Representative in a communication dated June 30, 2004.

The submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made in the subject application and is not to be construed as an admission that the information cited in this statement is material to patentability.

Please charge any fees due to Deposit Account 02-2666. A duplicate copy of the Fee Transmittal (PTO/SB/17) is enclosed for this purpose.

	11.	Ι.	
Date:	4/10/	0	

Respectfully submitted,

BLAKELY, SOKOLOFF TAYLOR & ZAFMAN LLP

Eric S. Hyman, Reg. No. 30,139

12400 Wilshire Boulevard, 7th Floor Los Angeles, CA 90025 Telephone: (310) 207-3800

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Melissa Stead

Date

Welen Stead

출력 일자: 2004/6/30

발송번호 : 9-5-2004-025847422

수신 : 서울 중구 순화동 1-170 에이스타워 4층

발송일자 : 2004.06.29

시영무 귀하

제출기일: 2004.08.29

100-712

# 특허청 의견제출통지서

출원인

명칭 한국전자통신연구원 (출원인코드: 319980077638)

주소 대전 유성구 가정동 161번지

대리인

성명 신영무

주소 서울 중구 순화동 1-170 에이스타워 4층

출원번호

10-2002-0078445

발명의 명칭

단전자 소자, 그 제조 방법 및 단전자 소자와 MOS트랜지스터를 동 시에 형성하는 제조방법

이 출원에 대한 심사결과 아래와 같은 거절이유가 있어 특허법 제63조의 규정에 의하여 이를 통지하 오니 의견이 있거나 보정이 필요할 경우에는 상기 제출기일까지 의견서[특허법시행규칙 별지 제25호 의2서식] 또는/및 보정서[특허법시행규칙 별지 제5호서식]를 제출하여 주시기 바랍니다.(상기 제출 기일에 대하여 매회 1월 단위로 연장을 신청할 수 있으며, 이 신청에 대하여 별도의 기간연장승인통 지는 하지 않습니다.)

이 출원의 특허청구범위 전항에 기재된 발명은 그 출원전에 이 발명이 속하는 기술분야에서 통상의 지식을 가진 자가 아래에 지적한 것에 의하여 용이하게 발명할 수 있는 것이므로 특허법 제29조제2항의 규정에 의하여 특허를 받을 수 없습니다.

공의 ㅠ요에 되어서 특이를 곁들 구 없습니다. - 본원의 청구범위 전항에 기재된 발명은 다수개의 실리콘 전자섬들을 갖는 반구형실리콘총을 구비한 것을 특징으로 하는 단전자소자이나, 인용문헌(한국공개특허공보 2002-38274호(2002.05.23))에는 한 것을 특징으로 하는 단전자소자이나, 인용문헌(한국공개특허공보 2002-38274호(2002.05.23))에는 한구형의 나노크리스탈라인 실리콘이 형성된 구성이 설시되어 있었으므로, 본원의 청구범위 전항반구형의 나노크리스탈라인 실리콘이 형성된 구성이 설시되어 있었으므로, 본원의 청구범위 전항반구형의 나노크리스탈라인 실리콘이 형성된 구성이 설시되어 있었으므로, 본원의 청구범위 전항비기재된 발명은 상기 기술분야에서 통상의 지식을 가진 자기 인용문헌에 기재된 발명에 의하여 용이하게 발명할 수 있습니다.

[첨 부]

첨부1 한국공개특허공보 2002-38274호(2002.05.23) 1부. 끝.

2004.06.29

틀허청

전기전자심사국

응용소자심사담당관실 심사관 전범자



<<안내>>

문의사항이 있으시면 🗗 042)481-5740 로 문의하시기 바랍니다.

특허청 직원 모두는 깨끗한 특허행정의 구현을 위하여 최선을 다하고 있습니다. 만일 업무처리과정에서 직원의 부조리행위 가 있으면 신고하여 주시기 바랍니다.

▶ 홈페이지(www.kipo.go.kr)내 부조리신고센터

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AUG	16	2004 ZZ

# Substitute for form 1449A/PTO NFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

of Sheet

Complete if Known					
Application Number	10/691,852				
Filing Date	October 22, 2003				
First Named Inventor	Tae Woong Kang				
Art Unit					
Examiner Name					
Attorney Docket Number	5882P061				

	U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No.1	Document Number  Number - Kind Code <sup>2</sup> (if known)	Publication Date or Issue Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
		US-					
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	FOREIGN PATENT DOCUMENTS								
Examiner	Cite	Foreign Patent Document			Pages, Columns, Lines,	тв			
Initials*	No.1	Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	I°			
		1020020038274	05-23-2002	Hynix Semiconductor Inc.					
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Examiner	Date	
Signature	Considered	

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

Based on PTO/SB/08A (08-03) as modified by Blakely, Solokoff, Taylor & Zafman (wlr) 08/11/2003.

## KOREAN PATENT ABSTRACTS

(11)Publication number:

1020020038274 A

(43) Date of publication of application: 23.05.2002

(21)Application number:

1020000068406

(71)Applicant:

HYNIX SEMICONDUCTOR INC.

(22)Date of filing:

17.11.2000

(72)Inventor:

KIM, IL GWON

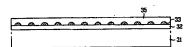
(51)Int. CI

H01L 27/10

(54) METHOD FOR FORMING SILICON QUANTUM DOT AND METHOD FOR FABRICATING NON-VOLATILE MEMORY DEVICE USING THE SAME

### (57) Abstract:

PURPOSE: A method for forming a silicon quantum dot is provided to form a high density silicon quantum dot, by forming an insulation layer by a vapor deposition method after amorphous silicon is seeded and by performing an oxidation process after the amorphous silicon is polished through a chemical mechanical polishing(CMP) process.



CONSTITUTION: The first insulation layer is formed on a semiconductor substrate(31). A plurality of nano-crystalline silicon(33) are formed on the first insulation layer. The second insulation layer is formed on the first insulation layer including the nano-crystalline silicon. A part of the second insulation layer and the nano-crystalline silicon is etched. The surface of the nano-crystalline silicon is oxidized.

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### Legal Status

Date of request for an examination (20001117)
Final disposal of an application (registration)
Date of final disposal of an application (20030428)
Patent registration number (1003866140000)
Date of registration (20030523)